



## Daylight Systems

# Vault Rooflights



 **multivault**

**marvault hf**

**marvault rl**



# Natural Daylight

- Improves concentration
- Leads to better productivity
- Creates environments people want to spend time in
- Saves energy, reduces CO2 emissions & helps meet Part L

**Vaulted rooflights provide an excellent, cost-effective way of getting natural light into a wide variety of buildings. Brett Martin Daylight Systems offers safe, effective rooflights that remain simple to install and are very cost competitive.**





# Daylight Systems

## Your Brightest Rooflight Choice

### Brett Martin Daylight Systems

is the UK and Ireland's largest and most progressive rooflight manufacturer, providing the widest variety of rooflight products ever available from one source.

## Vault Rooflights

Vault rooflights from Brett Martin Daylight Systems are easily incorporated in new or refurbished roofs. The range includes modular length double and triple skin vault rooflights and versatile vault rooflight systems capable of spanning between 1 and 9 metres.

Specifiers can conform to recommendations on the requirement for daylight by installing vault rooflights. The versatile nature of the rooflights means the desired amount of daylight is easily achieved without compromise to the building's safety, design or character. Vault rooflights can be supplied to any length and are designed to specific project requirements.

### EXCEPTIONAL CHOICE

- Designed for use on flat, low pitch & the crown of curved roofs
- Marvault HF and RL are ideal rooflight systems for canopy and walkway applications
- Cost effective modular units and bespoke systems available
- GRP and polycarbonate options
- Wide spanning capability - modular units up to 4m and rooflight systems up to 9m
- Continuous runs of insulated rooflights can be created - unrestricted lengths
- Improved safety, as the rooflight is raised out of the roof plane
- Good thermal performance
- U values as low as 1.0W/m<sup>2</sup>K
- Even distribution of light
- All systems designed for simple installation
- Aesthetically pleasing
- Non-fragile lining panels can be used with most vaulted rooflight systems to ensure safety to roofer during construction and satisfy the need, where necessary, of lining out the building swiftly during construction



### multivault

Multivault is a comprehensive range of modular double or triple skin barrel vault rooflights available in GRP and profiled Polycarbonate. Multivault SSR is specifically designed for use on standing seam roofs. Multivault allows the designer freedom to create unique vaulted rooflights and canopies cost-effectively.



### marvault hf

Marvault HF is an extremely versatile barrel vault rooflight system with a maximum span of 9m and hidden fixings. This vault rooflight option is a quality yet cost effective option.



### marvault rl

Marvault RL is a versatile barrel vault rooflight system that can be linked in any configuration. This tightly engineered architectural glazing system offers improved aesthetics and is available in 2 different height options – 1/6 and 1/2 of span to achieve different effects.





## Roof Type

Whatever the type of roof there will be a vault rooflight to suit



Most vault rooflights can be used on all types of roof including profiled industrial, curved, low pitch and flat roofs or for standing seam built-up metal roofing systems where a secret fix style system is required. Vaults are also suitable for use on roofs using single-ply (PVC) membrane. Many Designers prefer the out-of-plane profile created by vault rooflights.

### SAFETY

The HSE and HSA recommend vault rooflights as they are less easy to walk on accidentally than in-plane rooflights.

- An 'out of plane' rooflight is more visible and impossible to stand on inadvertently\*.
- Accidental foot traffic is minimised whilst design safety is enhanced.
- Multivault and Marvault vault rooflight systems are available as Class B Non-fragile to ACR[M]001:2005.

### GLAZING

Vaults are an aesthetically pleasing rooflight option that can be glazed to provide direct or diffused daylight, depending on the desired internal environment.

- The Multivault GRP option provides diffused light, limiting glare and creating an even distribution of light, with few shadows. This presents an ideal rooflight option for sports facilities where distracting shadows must be minimised. GRP tinted options can be specified for special orders.
- Glazing options available in Marvault HF and Marvault RL include clear, bronze and opal polycarbonate. Whilst clear provides direct light, the tinted options reduce solar heat gain, minimise glare from the sun and can provide privacy where necessary.

- Fire rated GRP and fire venting Polycarbonate options are available.

### PART L

Both rooflight systems are available in a range of options to satisfy or improve upon minimum U value requirements.

### ROOF TYPE

Multivault and Marvault rooflights are suitable for use on flat, curved, low pitch and standard pitch roofs. Multivault SSR is designed specifically for use on standing seam roofs. Some vault systems can be used on steeper pitched roofs - Please consult BMDS technical.

**\*Brett Martin Daylight Systems recommend that you never walk on any rooflights.**



# Vault Rooflight Range

Brett Martin Daylight Systems offers two different types of vaulted rooflights; Multivault and Marvault.

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## multivault

Multivault is an economic, highly functional, reliable, simple to fit barrel vault, which is particularly suitable for large areas and industrial applications.

### multivault GRP

Factory assembled GRP vault rooflights lap together to form rooflights of unlimited length with spanning capabilities up to 4 metres.



Multivault GRP are delivered to site in a factory assembled ready to install form. Multivault GRP is ideal for all roof types and are fitted onto separate kerbs, without any fixings penetrating the roof covering to preserve the principle of secret fix.

The integrated aluminium bar and the well fitting insulated aluminium end closures makes Multivault GRP a robust rooflight option.

### multivault SSR

Site assembled profiled polycarbonate vault rooflights specifically designed for use with standing seam roofs.



Multivault SSR does not require a separate kerb as it fits directly on to standard verge components. Multivault SSR forms a completely watertight roof covering. The design is approved by leading standing seam manufacturers.

## marvault

Marvault is a high quality, superbly engineered bespoke glazing bar system, offering superior aesthetics, flexibility and a choice of materials as well as very reliable long term performance, which is particularly suitable for any application where aesthetics are of importance.

### marvault hf

Versatile barrel vault rooflights with a maximum span of 9 metres and hidden fixings.



The Marvault HF roofing system includes a glazing bar design with no visible fixings. The system offers a maximum spanning capacity of 9 metres and is available in 3 height options – 1/8, 1/5, 1/2 of span. Vault rooflights of unrestricted lengths can be created using Marvault HF.

### marvault rl

Barrel vault rooflights with a semi-circular and a lower profile option with a maximum span of 5 metres.



The Marvault RL barrel vault rooflight is available in 2 height options - 1/6 and 1/2 of span to achieve different effects. This versatile architectural glazing is constructed using either multi-wall or solid polycarbonate in clear, bronze or opal tinted options. The excellent weather resistance and durability of Marvault RL make it an ideal choice for schools and other public buildings.



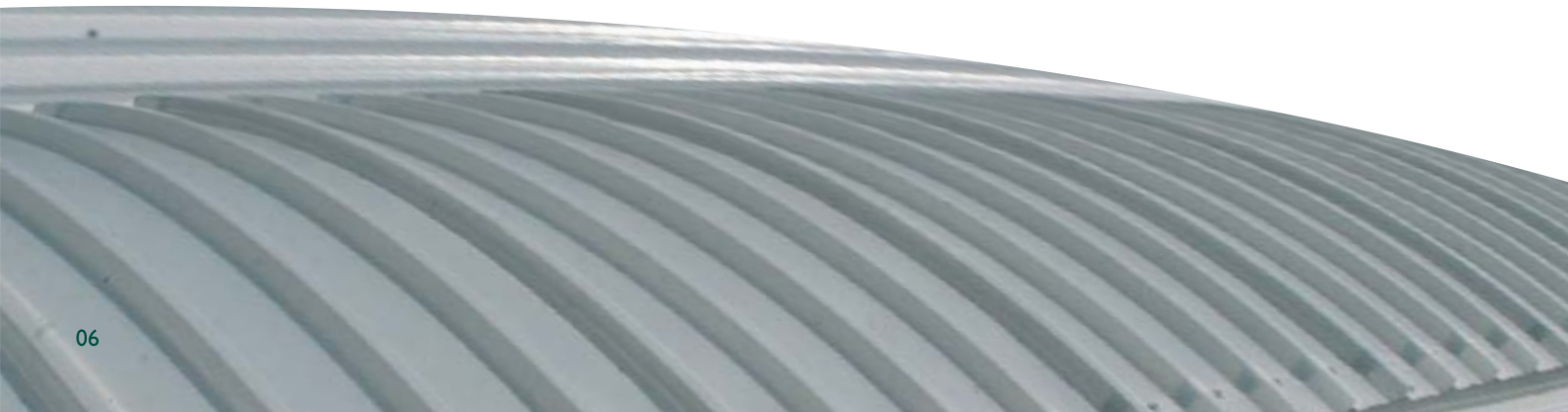
# Daylight Systems



## Multivault Properties

Multivault rooflights are suitable for a wide variety of applications. The characteristics of each Multivault system depend primarily on the glazing material used.

PROPERTY	MULTIVAUULT GRP	MULTIVAUULT SSR
LIGHT TRANSMISSION	Provides diffused light, limiting glare and giving an even distribution of light at ground level with few shadows. The light transmission for double and triple skin Multivault GRP is 65-70%.	Light transmission will be determined by tint chosen. For example, a double skin clear option provides almost 80% direct light into the building.  Clear and bronze tints provide direct light while an opal tint gives diffused light.
FIRE PERFORMANCE	The inner skin of Multivault GRP has Class 1 surface spread of flame fire rating whilst the outer skin has Ext. SAB rating. Multivault GRP does not soften and is effective in containing flames, smoke and hot gases.	Polycarbonate is a self-venting material that softens at relatively low temperatures allowing fire, smoke and hot gases to escape. Class 1(Y) deemed SAA.
SERVICE TEMPERATURE	GRP can withstand both high and low service temperatures ranging from -20°C to +80°C.	Polycarbonate's mechanical performance is known to remain stable in prolonged service in temperatures ranging from -20°C to +100°C.
SAFETY	Double and triple skin Multivaults are rated Class B Non-fragile to ACR[M]001:2005. The out of plane construction reduces the likelihood of people accidentally stepping on the rooflight. Non-fragile lining panels can be used with most vaulted rooflight systems to ensure safety to roofer during construction and satisfy the need, where necessary, of lining out the building swiftly during construction.	
PART L	Double skin Multivaults have a U value of 3.0W/m²K. Triple skin Multivaults have a U value of 2.0W/m²K.  Using separate liners and/or Cleartherm (a thermal insulating layer) can achieve a U value as low as 1.0 W/m²K	
LONGEVITY	Special UV protective films in the weather sheet give a Multivault GRP a life expectancy of up to 30 years.	Multivault SSR is manufactured from high quality UV stable polycarbonate sheet. Light transmission will be maintained for at least 10 years and weatherability for 20 years.
ROOF TYPES	Flat, curved, standing seam, low and standard pitch roofs.	Flat, curved, standing seam, low and standard pitch roofs.  Multivault SSR is engineered for all standing seam roofs. Unique apex adapter and jointing system allows easy length adjustment.







PROPERTY	MULTIVAULT GRP	MULTIVAULT SSR
Glazing	Double and triple skin	Single skin over separate liner and (optional) Cleartherm, or double skin over separate liner
Tints*	Translucent	Clear, Bronze, Opal, Textured
Curve radius (mm)	3150	900
Span Width (mm)	Up to 4000	1200
Module Length (mm)	255 / 1020	250 / 1000
Weight (kg/m <sup>2</sup> )	4.7	5.4
Service Temperature Range (°C)	-20 to +80	-20 to +100
Light Transmission (Double skin - clear %)	69	79
U value (W/m <sup>2</sup> K)		
Double skin	3.0	3.0
Triple skin	2.0	2.0

\* Other tints are available for special orders.

Polycarbonate has high coefficient of linear expansion. It is essential that this movement is taken into account at installation. Fixing holes must have a larger diameter than the shank of the fixing being used. Failure to do so will result in damage to the rooflight.





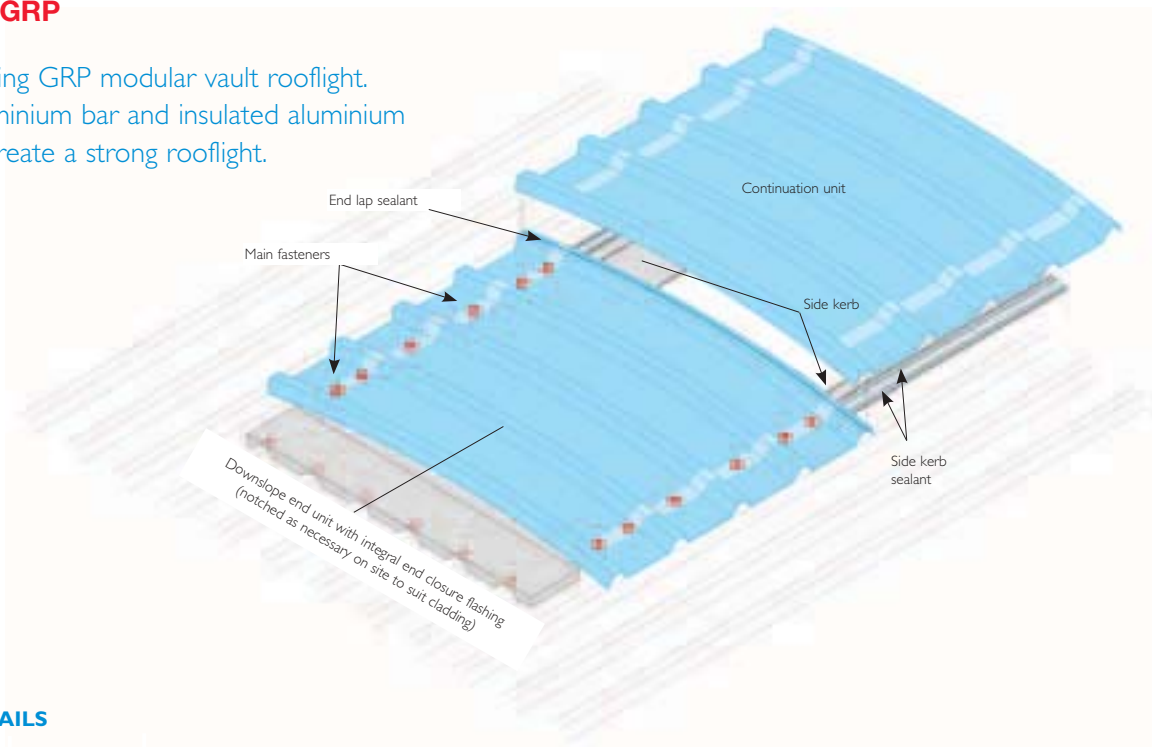
# Daylight Systems



## Multivault Product Range

### multivault GRP

Smoothly curving GRP modular vault rooflight.  
Integrated aluminium bar and insulated aluminium end closures create a strong rooflight.



End lap sealant

Main fasteners

Downslope end unit with integral end closure flashing (notched as necessary on site to suit cladding)

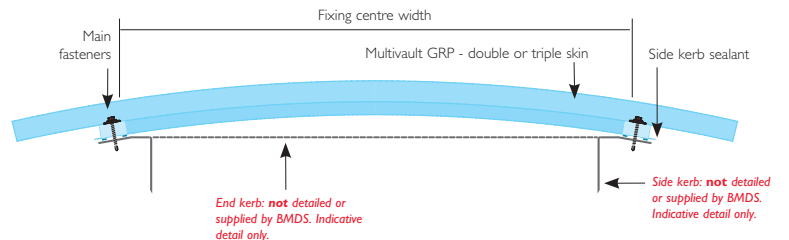
Continuation unit

Side kerb

Side kerb sealant

#### PRODUCT DETAILS

Fixing centre width (mm)	Angle of kerb (°)	Height at centre (mm)
1000	10	105
1200	12	125
1500	15	155
2000	20	225
3000	30	445
4000	40	785



Whilst every effort has been taken to ensure the accuracy of all diagrams they are purely indicative. Please consult our Technical department for further guidance.

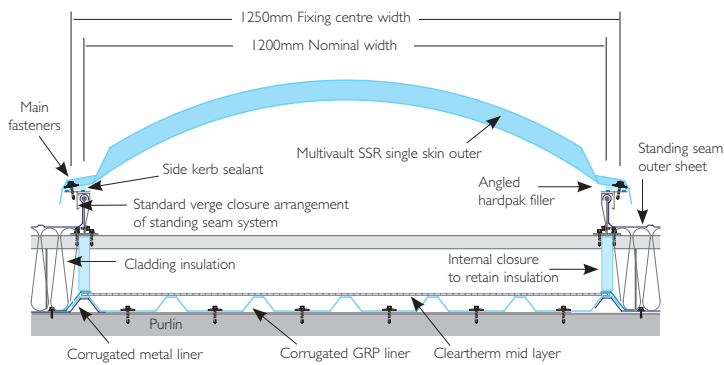
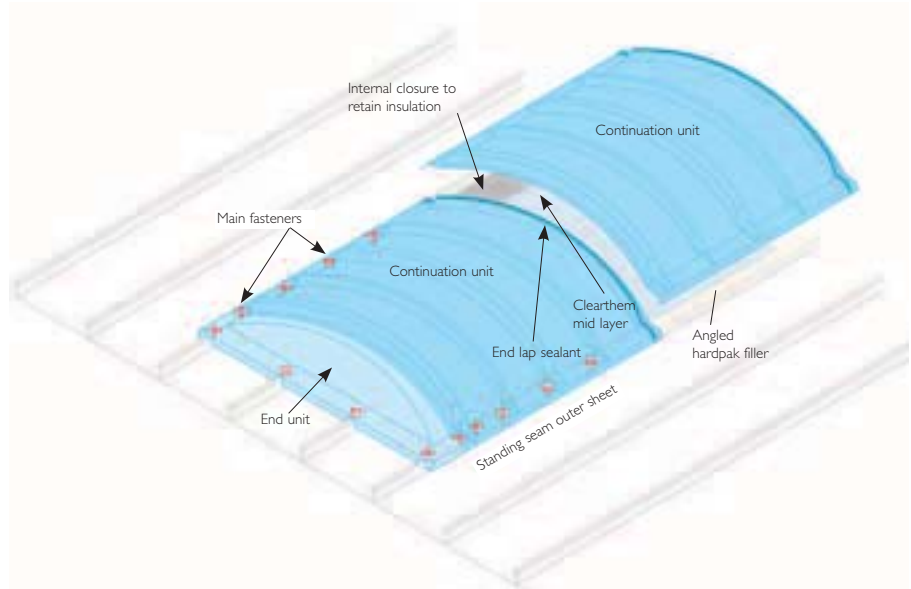
For installation details see Technical Bulletin 170.

Units supplied as either Down Slope; Continuation; Up Slope or Crown Units.  
Modular lengths are 1020mm (Down Slope Units also available in lengths of 765mm, 510 and 255mm).





Smoothly curving polycarbonate modular vault rooflight designed for use on standing seam roofs.



For installation details see [Technical Bulletin 173](#).

Whilst every effort has been taken to ensure the accuracy of all diagrams they are purely indicative. Please consult our Technical department for further guidance.

**PRODUCT DETAILS**

Nominal width (mm)	Fixing centre width (mm)	Max kerb width (mm)	Height at centre (mm)
1200	1250	1300	225

Units supplied as either Down Slope; Continuation; Up Slope or Crown Units. Modular lengths: Up Slope and Down Slope Units - 250mm. Continuation Units - 1000mm (also available in lengths of 750mm, 500mm and 250mm) Crown Units - 500mm. Units specifically designed to fit onto the standard verge closure / kerb detail supplied by the standing seam supplier.



# Daylight Systems



## marvault hf

Versatile barrel vault rooflights with a maximum span of 9 metres and hidden fixings.

- Marvault HF's innovative aluminium glazing bar is invisibly fixed at the base of bar preventing fixings from weathering and providing a completely smooth profile.
- The system offers a maximum spanning capacity of 9 metres and is available in 3 height options – 1/8, 1/5, or 1/2 of span\*.
- Rooflights of unrestricted lengths can be created.
- The carefully designed system has in-built drainage and effective sealing. The standard mill finish is brushed aluminium but can be powder coated to any specified colour.
- Marvault HF uses Marlon ST Longlife and Marlon FSX, multi-wall and solid sheet polycarbonate, offering exceptional impact resistance and surface protection due to a co-extruded UV protective layer.

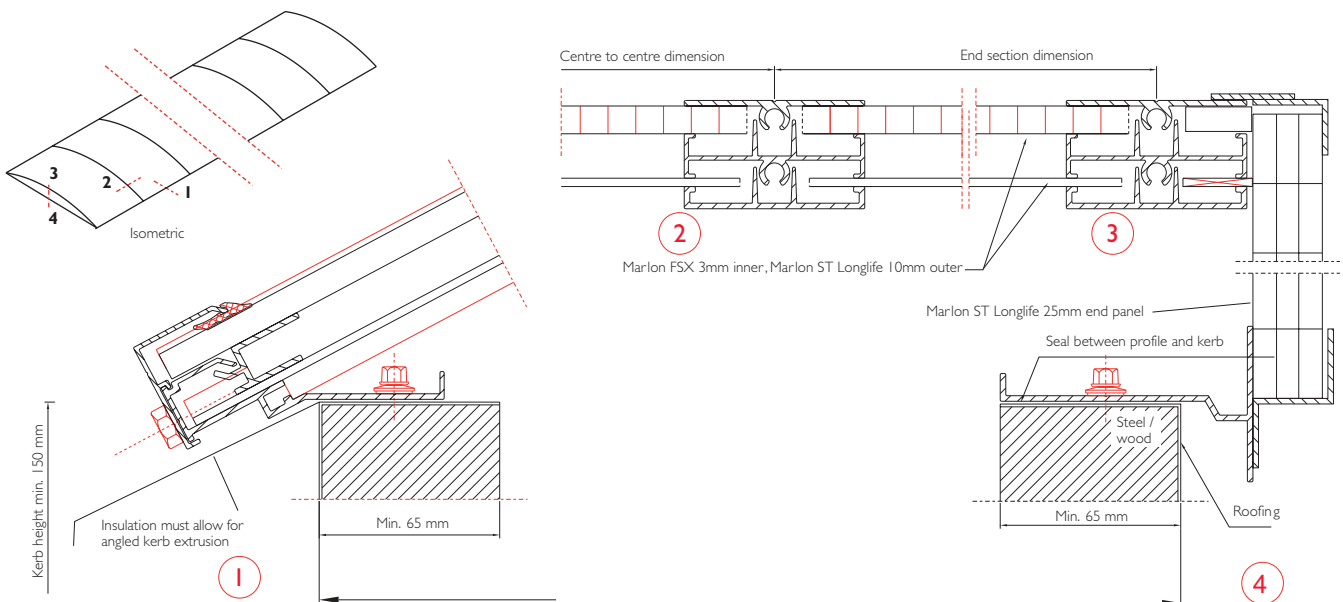
\* not available for all widths.

### OPTIONS TABLE

Marvault HF radius	Minimum width (mm)	Maximum width (mm)
1/8 Radius	600	2900
1/5 Radius	600	9100
1/2 Radius	1000	5000

Glazing bar detail will vary depending on span, height and glazing material chosen. Please contact our Technical department for further information.

### SECTION ACROSS MARVAULT HF 1/8 RADIUS





## marvault hf    marvault rl

### Properties

#### VENTILATION

A number of opening options to provide natural ventilation can be incorporated into both Marvault HF and RL rooflights.

Each of the ventilation options is available in a choice of either manual or powered opening. Marvault HF and RL can also be used in conjunction with automatic rain, heat and humidity sensor systems.

#### FIRE PERFORMANCE

Polycarbonate is a self-venting material that softens at relatively low temperatures allowing fire, smoke and hot gases to escape. Class I(Y) deemed SAA.

#### SERVICE TEMPERATURE

Polycarbonate's mechanical performance is known to remain stable in prolonged service in temperatures ranging from -40°C to +100°C.

#### IMPACT RESISTANCE

Marvault HF and RL rooflights have exceptional impact resistance and are particularly suitable for use in areas where breakage is a potential problem.

#### SAFETY

Marvault HF and RL are available in non-fragile options.

#### PART L

Marvault HF and RL multi skin options are available for U values down to 1.6W/m<sup>2</sup>K.

#### LONGEVITY

Marvault HF and RL are manufactured from high quality UV stable polycarbonate sheet. Marlon ST Longlife along with

Marlon FSX Longlife are supplied with the assurance of a 10 year limited light transmission and breakage warranty.

#### INSTALLATION

Marvault HF and RL are supplied to site with bars pre-curved to tight tolerances and glazing cut to size. For simple trouble-free installation we recommend using one of our trained installers.







## Daylight Systems



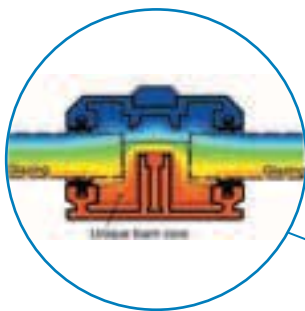
# marvault<sup>rl</sup>

Attractive and versatile architectural glazing with excellent weather resistance and durability. Marvault RL is widely specified for schools, public buildings and domestic projects where reliability is essential.

- Versatile bespoke system.
- Maximum span of approximately 5 metres.
- Two height options available -  $\frac{1}{6}$  for a gentle low curved arched profile and  $\frac{1}{2}$  for a dramatic semi-circular effect.
- Well-engineered system can be mounted onto most builder's upstands.
- Aluminium mill finish or powder coated to any colour.
- Fully water managed using interconnecting gutter design and gasket system to ensure safe moisture drainage.
- Low U value and non-fragile options available.

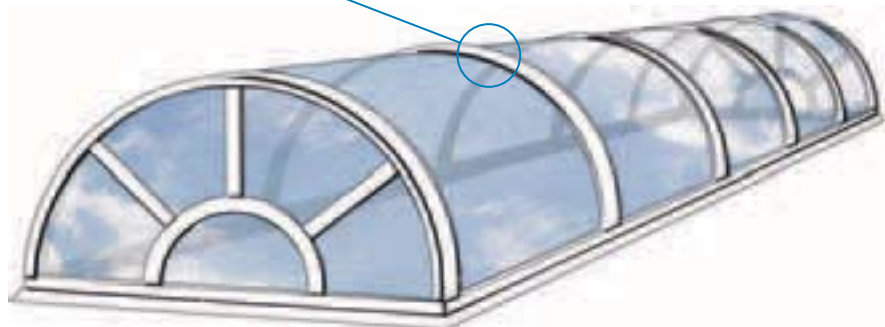
### Marvault RL $\frac{1}{6}$

Low rise barrel vault: height  $\frac{1}{6}$  of span.



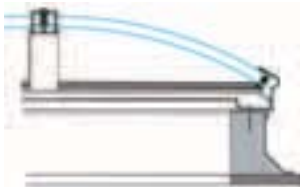
### Marvault RL $\frac{1}{2}$

Height  $\frac{1}{2}$  of span.





## END OPTIONS



Half dome end: section



Detail

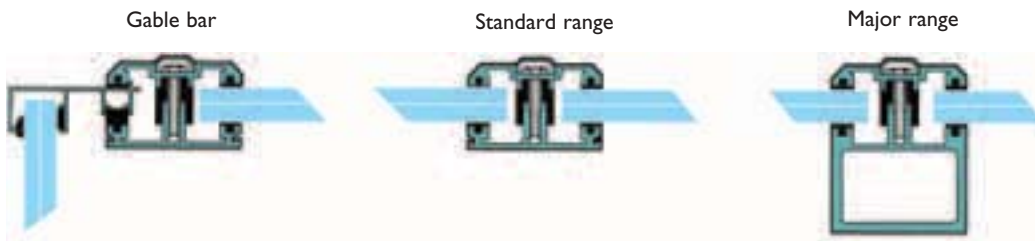


Vertical end: section

Half dome end details for  $\frac{1}{6}$  height is only available up to 1.8m span.  
For end options on  $\frac{1}{2}$  span, please consult technical services.

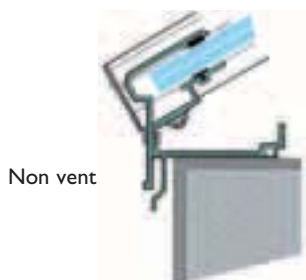
## CROSS SECTION OF GLAZING BARS

Marvault RL  $\frac{1}{6}$  with multi-wall polycarbonate glazing\*

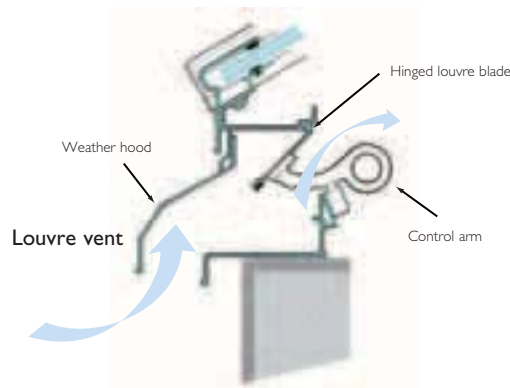


Cross section details for single and double skin Marvault RL  $\frac{1}{6}$  and  $\frac{1}{2}$  are similar and are available on request.  
\*For details on Marvault RL glazing options see page 14.

## VENTILATION OPTIONS



Non vent



*Whilst every effort has been taken to ensure the accuracy of all diagrams they are purely indicative. Please consult our Technical department for further guidance.*



# Daylight Systems



## marvault hf    marvault rl

# Glazing Options

### GLAZING

Marvault HF and RL uses premium quality Marlon FSX Longlife, solid polycarbonate sheet and Marlon ST Longlife, multi-wall polycarbonate sheet.

Marlon FSX Longlife is an outstanding solid polycarbonate glazing material offering optical clarity similar to that of glass. It is a relatively light material easing handling and installation and can be cold curved on site. Marvault HF uses 3mm as standard for single and double skin formats. Marvault RL typically uses 3mm or 4mm solid polycarbonate.

Bronze and opal tint options help control the amount of light entering the building and can limit glare from the sun. The clear tinted option will maximise natural daylight.

Marlon ST Longlife, premium quality multi-wall polycarbonate sheet can be used in both twinwall and triplewall formats for use in Marvault HF and RL. Depending on thermal performance requirement 10mm and 16mm thick sheets can be used. Marlon ST Longlife 16mm triplewall has a U value similar to that of double glazing.

### MARVAULT PROPERTY TABLE

PROPERTY	MARVAULT HF / MARVAULT RL
Length	Unrestricted lengths achievable
Typical span capacity	9 metres maximum – Marvault HF 5 metres maximum – Marvault RL
Loading	Designed in accordance with data from: BS6399: Part 1 & 3 1984 Max 1.5kPa wind & 0.75kPa imposed
Safety	ACR[M]001:2005 Class B option available
Light transmission	Dependent on glazing options. Glazing in multi-wall or solid polycarbonate in clear, bronze or opal* Marlon ST Longlife 16mm Triple wall clear = 82% Marlon FSX Longlife 3mm clear = 90%
U values	Part L: below 2.0W/m <sup>2</sup> K
Fire regulations	BS476 Part 7: class I(1991) Class '0' Tp(a)

\* Textured glazing available in some options





marvault hf

marvault rl

multivault  
GRP

multivault  
SSR

## Handling and installation instructions

### LIGHT LEVELS

The provision of natural daylight is a regulatory requirement, with recommendations for a minimum rooflight area of 10%, a 12% area for industrial buildings, and a greater percentage of rooflights for buildings such as sports halls etc.

### COMPATIBILITY

Vault rooflights from Brett Martin Daylight Systems are compatible with most commonly used building materials. However, solvents and alkaline cleaners should not be used with any vault rooflight. Polycarbonate vault rooflights should not come into contact with any plastisol coated steel.

### KERBS

Appropriate roof apertures and insulated kerbs in either timber, steel, GRP or concrete for the fitting of the selected vault rooflight system must be provided by the contractor.

### HANDLING

Vault rooflights should always be handled by two people. If vaults are to be mechanically handled they must be secured on pallets and deposited at safe positions on the roof. Great care must be taken with all vaults in windy conditions.

### STORAGE

All vault rooflights should be stored in cool, dry conditions away from direct sunlight, preferably indoors. If outside storage is unavoidable the units should be stacked on a pallet and covered with an opaque waterproof cover draped over timbers placed on the top vault to ventilate the stack and prevent overheating.

### SAFETY

Rooflight installations must comply with the Construction (Design and Management) Regulations 1994. Vault installations in all materials can be made to satisfy the Regulations. Brett Martin CDM specifications and guidance should be obtained for specific projects.

**Brett Martin Daylight Systems recommend that rooflights should not be walked on under any circumstances.**

### MAINTENANCE AND CLEANING

The general condition of units and all accessories, particularly security of fixings and sealants, should be checked periodically. Abrasive and alkali cleaning materials should be avoided. A mild detergent and a soft rag or sponge can be used to remove surface dirt.



### TECHNICAL SUPPORT

Please contact Brett Martin Daylight Systems for further guidance, including technical bulletins on installation, handling and maintenance, COSHH data sheets, NBS product specification clauses and CPD seminars.



# Daylight Systems

## THE COMPLETE RANGE



### trilite

### marlon **cs** LONGLIFE

#### In Plane Site Assembled Rooflights

Site assembled rooflights, manufactured in both GRP and polycarbonate, are quick and easy to install. All sheets achieve the highest levels of profile accuracy and cover a range of options, including safety levels, U values and fire ratings. Single, double and triple skin rooflights are available for a huge variety of applications from canopies to warehouses and factories to retail and leisure facilities.



### xlokultra

### xlokexpress

#### Panel Glazing Systems

Continuous run rooflights. These versatile interlocking panel glazing systems are ideal for the creation of covered play areas and walkways. Panels are fully factory assembled for fast and simple site installation, without the need for glazing experience. With up to 4 1/2m span between supports, top hung vents and a non-fragile option, this is a highly affordable system.



### energy **saver**

#### FAIR

Factory Assembled Insulating Rooflights manufactured to suit a customer's exact specification. Delivered to site as a complete ready to install unit. A cost-effective rooflight option that can be incorporated into most new or refurbished roofs. Manufactured in both GRP and polycarbonate in formats to suit all of the commonly encountered sandwich panel roof coverings.



### marlon **fsx** LONGLIFE

#### Solid Polycarbonate Sheet

Solid polycarbonate sheet with shatter resistance up to 200 times that of glass, ideal for canopy glazing applications. Marlon FSX Longlife has co-extruded UV protection on both sides to cut out 98% of harmful UV radiation, and offers excellent resistance to weather and atmospheric conditions.



### multivault

#### Modular Vault Rooflights

Comprehensive range of modular length, double skin vault rooflights available in GRP and polycarbonate. Suitable for either flat, pitched or curved roofs, Multivaults are a cost-effective range of vaulted rooflight options that are easily incorporated into new or refurbished roofs.



### marlon **st** LONGLIFE

#### Multi-wall Polycarbonate Sheet

Multi-wall polycarbonate sheet with a shatter resistance up to 200 times that of glass. Available in five structures and nine tints, to provide a range of thermal performance and light transmission options. Co-extruded UV protection cuts out 98% of harmful UV radiation.



### marvault **hf** marvault **rl**

#### Vault Rooflight Systems

Continuous run vault rooflights ideal for use on sports halls, assembly halls and over corridors. Marvault HF is a vault rooflight system with a maximum span of 9m and hidden fixings, which can achieve U values as low as 1.6W/m<sup>2</sup>K. Marvault RL barrel vaults provide long term reliability and high quality detailing, with different ventilation options available.



### rainwater

#### Industrial Rainwater Systems

An extensive range of rainwater management systems to suit every designer's needs.



### ritchlight **ultra**

#### Skylights

Attractive glazing bar systems, with excellent weather resistance and durability, widely specified where reliability is paramount. With many ventilation and solar control options and double glazed in either glass or polycarbonate, this is the ideal system for large area glazing up to 5m span and any length.



### mardome

#### Dome Rooflights

A range of modular pyramid and dome rooflights with unique security and water-proofing features. These are reliable, safe, secure and well insulated rooflights. Suits new build or refurbishment projects, replacing just the glazing or the whole unit.



### ACCESSORIES

A comprehensive range of accessories including foam fillers, available in a wide range of options, and tapes, sealants and adhesives, manufactured and sourced from the best in the industry.



# Daylight Systems

## BRETT MARTIN DAYLIGHT SYSTEMS

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Install more rooflights and help achieve compliance with Parts L2A & L2B for your building.



All reasonable care has been taken in the compilation of the information contained within this literature. All recommendations on the use of our products are made without guarantee as conditions of use are beyond the control of Brett Martin. It is the customer's responsibility to ensure that the product is fit for its intended purpose and that the actual conditions of use are suitable. Brett Martin pursues a policy of continuous product development and reserves the right to amend specifications without prior notice.